

SECTION C

STATEMENT OF WORK

Statement of Work

Mound Operable Unit 1 (OU-1)

Project Area

Table of Contents

1.0	Operable Unit – 1 Supplemental Remedial Action Project (OU-1) End-State and Restoration Requirements	2
1.1	Task Order Purpose and Overview	2
1.2	End-State	4
1.3	Contractor Performance	5
1.4	Agency Agreements	5
2.0	Environmental Remediation	6
2.1	Site Sanitary Landfill, Liner and Cap	7
2.1.1	Site Sanitary Landfill Waste	7
2.1.2	Site Sanitary Landfill Cover, Berm, Cap and Liner	7
2.2	Historic Waste Disposal Area	8
2.2.1	Thorium Drum Area (PRS-11)	8
2.2.2	Volatile Organic Compounds (VOCs) “Hot Spot” Area	9
2.2.3	Other Historic Waste Area	9
2.2.4	Dayton Unit Trench	10
2.3	Remediation of PRS 441 – Soil Staging Area	11
2.4	Final Verification Survey	11
2.5	Site Restoration	12
2.5.1	Final Grading, Seeding and Extraneous Debris Removal	12
3.0	Project Completion and Demobilization	16
4.0	Project Support	16
4.1	Project Management System	16
4.2	Environment, Safety and Health (ES&H) Program	16
4.3	Security	18
5.0	Regulator Interaction	18
6.0	Public Involvement and Stakeholder Interaction	18

1.0 Operable Unit – 1 Supplemental Remedial Action Project (OU-1) End-State and Restoration Requirements

1.1 Task Order Purpose and Overview

- (a) This is a Cost Plus Fixed Fee task order issued under the Department of Energy Environmental Management's Indefinite Delivery Indefinite Quantity (IDIQ) Task Order Contract. This task order and the contract reflect the application of approaches and techniques that emphasize results/outcomes and minimize "how to" performance descriptions. The Contractor has the responsibility for total performance under the Task Order, including determining the specific methods for accomplishing the work.
- (b) The purpose of the Task Order is to safely remove radioactive materials and contamination from the OU- 1 Project Area (Figure – Parcel 9) on the Miamisburg Closure Project (MCP) site to levels that will allow for industrial reuse in support of the accelerated closure of the MCP. The OU-1 selected response action is an excavation-based response action. The OU-1 Project consists of two (2) distinct projects: OU-1 Project (Figure 1 – Parcel 9) and Potential Release Site 441 (PRS 441) Project. The Contractor shall complete the necessary waste management and disposal of the contaminated soils, provide verification samples and reports, backfill of the excavation, and accomplish site restoration of the OU-1 Project Area to acceptable standards.
- (c) Although the OU-1 site was previously compliant with the requirements defined by the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) OU-1 Record of Decision (ROD), the actions taken under this task order are at the discretion of the Department of Energy and are additional remedial actions directed by the Congress of the United States in the 2006 House Conference Report 109-275, page 170. As part of the direction from Congress, DOE has been provided a \$30 million budget to complete the project. However, the total funds anticipated to be available for execution of the task order are \$29 million. These funds are only to be used for OU-1 remediation activities. No additional funds will be available to support the project or reimburse any costs incurred by the Contractor. Therefore, it is imperative that the Contractor only use the funds for OU-1 activities as defined in the SOW and this task order. In addition, it is imperative that the Contractor comply with all notification requirements in the contract, especially the notifications required under the Limitation of Funds clause.

- (d) The reuse vision for the OU-1 area is to permit the site to be developed without further restriction or limitation. The development plan for the area (as provided under the MMCIC Comprehensive Reuse Plan) is to construct an industrial or office structure on the site with its support systems (parking, utilities, etc.), and a public roadway. If funds are not sufficient to fully permit the implementation of the reuse vision, the DOE's goal and the Contractor's goal is to be the removal of wastes as prioritized in the SOW.
- (e) The OU-1 Project overall objectives/guidance for this Task Order are:
 - (i) Not to exceed \$29M
 - (ii) Comply with regulatory requirements and be protective of human health and the environment
 - (iii) Meet the spirit and intent of the Sales Contract
 - (iv) Permit industrial reuse of the OU-1 area
 - (v) Be consistent with the past cleanup practices, levels and objectives
 - (vi) Provide the most efficient use of government funds
- (f) The specific work required to be performed in order to meet these OU-1 Project overall objectives/guidance are set forth in the Statement of Work.
- (g) The primary area of concern consists of a Site Sanitary Landfill that sits on top of an older Historic Waste Disposal Area. The wastes in the Historical Waste Disposal area include radioactive materials and hazardous waste, and other wastes described in the SOW. The DOE has established the following waste removal priorities: 1) Thorium and Polonium Contaminated Waste Area (PRS-11); 2) Volatile Organic Compounds (VOCs) "Hot Spot" Area; 3) Other Historic Waste Area; 4) Dayton Unit Trench; and 5) Site Sanitary Landfill Waste.
- (h) DOE will incrementally authorize the remediation activities dependent on the Contractor performance and availability of funds.
- (i) The goal of the PRS 441 Project is to be compliant with the requirements defined by the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) as implemented by the Mound 2000 Work Plan and associated site cleanup objectives. Funding for the PRS 441 Project scope of work is provided separately from the funding appropriated by Congress for the OU-1 Project scope of work.

1.2 End-State

(a) In order to achieve Task Order completion, the following activities including all Task Order Statement of Work (SOW) requirements shall be completed by the date in Section B.4. The scope of these activities consists of incremental removal of the Site Sanitary Landfill, the identified areas of wastes in the Historic Waste Disposal area with radioactive wastes and high concentrations of solvents, and the re-grading of some of the surrounding soils. The scope of these activities includes the excavation, sampling, packaging, transporting, and disposal of the waste and the support activities associated with these activities. The End State is achieved when the following activities are completed:

- (i) Dispose offsite or stockpile the Site Sanitary Landfill, berm, cover, cap, and liner material(See Section C.2.1).
- (ii) Sample, package, transport, and dispose offsite contaminated debris and soil in Thorium Drum Area (PRS-11), (See Section C.2.2).
- (iii) Sample, package, transport, and dispose offsite the "Hot Spot" of soil and debris contaminated with volatile organic compounds (VOCs) (See Section C.2.3).
- (iv) Sample, package, transport, and dispose offsite Other Historic Area wastes (See Section C.2.3).
- (v) Remediate and verify PRS 441 as required by the Mound 2000 Work Plan and Mound Residual Risk Evaluation Methodology. (See Section C.2.4).
- (vi) Perform Final Verification Surveys in the OU-1 area to support an unrestricted industrial reuse scenario per the Mound 2000 Work Plan and Mound Residual Risk Evaluation Methodology. Provide supporting documentation to complete the draft ROD Amendment (See Section C.2.4).
- (vii) Dispose all waste, backfill, grade, and seed all disturbed areas (See Section C.2.5).
- (viii) Remove all debris and extraneous material from Parcel 9 and PRS 441. Backfill and grade all disturbed areas to drain (See Section C.2.5).

- (ix) Restore the Site to a CERCLA compliant configuration (See Section C 2.5).
- (x) Decontaminate and dispose offsite of all equipment and temporary structures used for this SOW (See Section 3.0)

1.3 Contractor Performance

- (a) The Contractor shall furnish all personnel, facilities, equipment, material, services and supplies (except as set forth in this Task Order to be furnished by the DOE), and otherwise do all things necessary to accomplish work in a safe, compliant, effective, and efficient manner. This includes but is not limited to management of all short-term human health and environmental media impacts and decontamination of equipment.
- (b) The definitions of the terms and conditions set forth in Section J, Attachment B are applicable to the SOW.
- (c) The site is owned by the US Department of Energy and is currently being remediated and transferred to the Miamisburg Mound Community Improvement Corporation (MMCIC). Interface by the Contractor with the MMCIC may be necessary and/or shall be required at times. Such interface shall be done with the consent of and notice to the DOE; however, only the Contracting Officer has the authority to direct the Contractor and/or direct changes.

1.4 Agency Agreements

- (a) The Contractor shall perform all work in accordance with Mound 2000 Work Plan requirements and the OU-1 ROD, as amended.
- (b) The Contractor shall be responsible for obtaining, maintaining, and coordinating the necessary permits and licenses for performance and those that are required jointly with DOE. The Contractor shall work jointly and/or through DOE when it comes to interactions with regulatory agencies regarding permit and environmental compliance related issues. This includes any and all issues, including compliance, relating to permits that are in the Contractor's name.

2.0

Environmental Remediation

- (a) The following sections describe the work scope to be accomplished under this Task Order. The intent of the information contained in the subsequent sections is to provide the best available information on “what” work scope needs to be accomplished, but not to prescribe “how” individual work scope elements will be accomplished.
- (b) The Contractor shall maintain daily logs of the quantities and weight of the soils and waste being excavated, shipped, and/or disposed. The logs shall be used to monitor, track and report the quantities and weight of waste for each category: excavation, shipment, and/or disposal.
- (c) The data required to be obtained and maintained pertaining to the excavation of waste shall include field-screening results, field location sketches, elevations, sampling logs, and laboratory analytical results, including sampling and analysis for the waste disposal facility’s waste acceptance criteria (WAC).
- (d) The Contractor shall be responsible for the preparing of and obtaining necessary approvals of the plans, permits, and licenses which are necessary to perform all work. This shall include, but not limited to, activities such as installing/maintaining fences and gates, silt fences, required signs and implementation of other controls necessary for health and safety of the public, workers, and environment. The Contractor shall be responsible for developing the Site Access and Traffic Control Plan for the OU-1 and PRS 441 projects. The Contractor shall be responsible for setting up work areas that are necessary in order to accomplish all work, including work related to decontamination of equipment and trailers used under this task order. The Contractor shall, as necessary to perform the work as required by the SOW, relocate/remove/install extraction wells and reinstall pipelines from the wells to the buildings.
- (e) The following sub-sections, C 2.1 and C 2.2 are listed in the order of excavation priority and within these sections the excavation priority of each type of waste or each area is listed. The Contractor may be required to complete sub-sections 2.4 and 2.5 prior to completing all work in sub-sections 2.1 and 2.2 to ensure the overall final cost of work performed does not exceed the allowable funding for the OU-1 Project.

2.1 Site Sanitary Landfill, Liner and Cap

2.1.1 Site Sanitary Landfill Waste

- (a) The Site Sanitary Landfill wastes, based upon historic reports, are reported to consist primarily of office wastes, cafeteria wastes, some bioassay samples and soil. Although the wastes in the Site Sanitary Landfill are expected to be non hazardous, there is a possibility that it may have some wastes from the Historic Waste Disposal Area. Historic documents reflect that the wastes placed in the Site Sanitary Landfill were screened for plutonium-238. No radioactive wastes were found above the screening level (100 pCi/g) for plutonium-238.
- (b) The Contractor shall determine the levels of contamination of wastes from the contaminated liner, berm and clean liner materials by field screening, and at the same time maintain and segregate radioactive and hazardous materials segregated until the Contractor determines the final disposition paths for the waste which supports maximization of performance as well as the least costly disposition path. The Contractor shall maintain stockpiled materials to prevent the spread of contamination and odor.

2.1.2 Site Sanitary Landfill Cover, Berm, Cap and Liner

- (a) The Site Sanitary Landfill has a soil cover, cap and liner as shown in the "Overflow Pond" drawings on the Mound OU-1 Project website. The berm that surrounds the wastes cell was constructed from soils excavated from a hill that was located where the current overflow pond now exists. There is a possibility that sediments containing low-level plutonium contamination placed in the Site Sanitary Landfill were also randomly incorporated into the Site Sanitary Landfill cap during construction. Mound Plant health physicists screened the entire Site Sanitary Landfill and Overflow Pond construction project (see Section J, Attachment D). One bucket (less than five gallons of soil) with an elevated plutonium concentration above 100 pCi/g was removed. Only material with plutonium levels greater than 100 pCi/g was considered hazardous during the time frame in which the Site Sanitary Landfill and Overflow Pond were constructed. The current 10^{-5} cleanup value for Pu-238 is 55 pCi/g.
- (b) The Contractor shall excavate berm material in order to access the Historical Waste Disposal areas. The Contractor shall be responsible for maintaining the berm material and will segregate the waste (radiological and hazardous) to prevent the spread of contamination and odor.

- (c) For excavation in areas above the Historic Waste Disposal Areas, the Contractor shall excavate in 2 foot depth increments, and screen, in 2 foot depth increments for Rad, VOCs, and visible waste or staining below the berm material (elevation 710). The Contractor shall excavate in 2 foot depth increments and screen in 2 foot depth increments, for Rad, VOCs, and visible waste or staining below the PRS11 backfill material (elevation 688). For excavation in areas found not to be above the Historic Waste Disposal Area, the Contractor shall excavate down to native soil only as shown in the "Overflow Pond" drawings on the Mound OU-1 Project website and such drawings are incorporated into the SOW.

2.2 Historic Waste Disposal Area

- (a) The Historic Waste Disposal area consists of the following, which are listed in the order of removal priority (See Figures 2 and 3):
- (i) Thorium Drum (PRS-11) Area
 - (ii) VOC "Hot Spot" Area
 - (iii) Other Historic Waste (Remaining Historic Landfill Area)
 - (iv) Dayton Unit Trench

2.2.1 Thorium Drum Area (PRS-11)

- (a) In the 1950s approximately 2500 empty 55-gallon drums contaminated with thorium were crushed and buried in a trench in the southwest corner of OU-1. As part of a separate disposal operation in 1965, sand contaminated with polonium-210 (a residual product of the polonium research and production conducted in the early 1950s) was also placed in the trench. This Thorium and Polonium Contaminated Waste Area is now known as Potential Release Site 11 (PRS-11). Subsequent activities smeared some of the material ("smear zone") in the trench across areas of the Historic Waste Disposal Area. During the summer of 2005, a portion of the crushed thorium drums from within the Historic Waste Disposal Area was removed from the southwest corner of the OU-1 area. Other waste that was found and excavated included the following: wood, brick, glass, laboratory bottles, sealed intact bottles with solvents and mercury, an I-beam, a utility pole, a tank, personal protective clothing, mercury contaminated material, solvent contaminated material, material contaminated with plutonium-238, uranium-238, radium-226, lead-210 and thorium-232. The area was subsequently backfilled with clean soil. Available as a reference document only is the PRS-11 On-Scene Coordinator's (OSC) Report.

- (b) The Contractor shall excavate PRS-11 and the smear zone. The Contractor will package, transport/ship, and dispose of the waste and material from PRS-11 and the smear zone.

2.2.2 Volatile Organic Compounds (VOCs) “Hot Spot” Area

- (a) The Mound Plant began a sampling program for VOCs in 1984, and initiated extensive surface and subsurface soil and ground water investigations in 1987. In 1989, the Mound site was placed on the U.S. Environmental Protection Agency’s (EPA) National Priority List (NPL) as a result of the VOCs in ground water that were first detected in 1986 and have been monitored ever since. The OU-1 area was determined to be the source of some of the VOC contamination. Based on the analyses of samples collected from sample boring at OU-1, there is a “hot spot” with soil and wastes contaminated with high concentrations of VOCs in the Historic Waste Disposal Area. In June 1995, a CERCLA Record of Decision (ROD) for OU-1 was signed by the U.S. Department of Energy, the U.S. EPA and the Ohio EPA. This ROD selected a remedy, a ground water pump-and-treat system, to collect, treat, and dispose of ground water contaminated with VOCs. The ground water pump-and-treat system was installed in 1996. Shortly thereafter the DOE installed a Soil Vapor Extraction (SVE) system to treat VOC contamination in the vadose (unsaturated) zone and mitigate the continued migration of VOC contaminants to ground water. To date, the SVE system has removed approximately 4,000 pounds of VOCs. The SVE monitoring wells in the southwest quadrant of the OU-1 site have detected VOC contaminants from an area just to the North of the extraction wells. This area is considered a “Hot Spot” source of VOCs.
- (b) The Contractor shall excavate the VOC Hot Spot Area, including all waste and soils below the PRS-11 Area that is and will have been excavated (Section 2.2.1). The Contractor shall package, transport/ship, and dispose of the all material and waste.

2.2.3 Other Historic Waste Area (Remaining Historic Landfill Area)

- (a) The remainder of the historic waste disposal area contains a variety of wastes, including ordinary laboratory, office and kitchen wastes, along with sediments containing metals (beryllium and mercury), plating wastes, oils and chlorinated and non-chlorinated solvents. Materials expected to be found in the remainder of the Historic Waste Disposal Area are likely to be similar to those found during the PRS-11 excavation. The Contractor shall excavate, package, transport/ship, and dispose of the Other Historic Waste in the following areas (see Figure 4 geographical areas) in the following order:

- (i) Southern end of Historic Waste Disposal Area and the B2 Area: Extends from the south side of the dike around the overflow pond to the south side of the B2 area. The top of the excavation on the west side of the excavation is to be no closer than four feet east of the road pavement and is to have a safe and stable layback slope that is sufficient to support the road.
- (ii) Below the Road: Extends from the intersection north to the dike on the south side of the overflow pond and westward under the road from the previous excavation area (in Section 2.2.3 (a)(i)). An alternate traffic access for the public or lessees of the MMCIC may be necessary and the Contractor is required to ensure that the public and lessees have an alternate route of access.
- (iii) Northern end of Historic Waste Disposal Area: Extends northward from the south side of the overflow pond dike.

2.2.4 Dayton Unit Trench

- (a) In 1954, salvage material from several buildings in Dayton, Ohio used for research purposes (Dayton Unit trench) was disposed in an excavated trench along the southern boundary of the OU-1 area. This Unit lies below the PRS 11 and may extend below the water table (elevation 680.5). The Dayton Unit trench contains buried wood ash and debris from a fire that had consumed the polonium-contaminated flooring from the Dayton Units. Since polonium-210 has a half-life of 138 days, it is not expected to be present as a contaminant unless radiological parent material is present. Lead-210 (half-life of 22 years) may have been used in one of the processes to produce polonium-210 (a daughter of lead-210) and may be present in the trench, decaying to polonium-210. Bismuth-210 may also be present as a trace contaminant.
- (b) The Contractor shall excavate all of the material/waste until the Mound Cleanup Value Table (Table-1), as well as the values in Section 2.4 are achieved. The Contractor shall not excavate beyond the ground water table. The contractor shall package, transport/ship, and dispose of all waste/material. In the event the Contractor cannot achieve the Mound Cleanup Values identified above without excavating beyond the ground water table, the Contractor shall notify the Contracting Officer immediately.

2.3 Remediation of PRS 441 – Soil Staging Area

- (a) PRS 441 is the Soil Staging Area and Expansion Area located near the rail spur, north of the Overflow Pond. This area has been used for the staging and loading of contaminated soils and debris awaiting shipment off-site.
- (b) To enable continued use of the rail spur, this area can be one of the last areas to be remediated by the Contractor. Funding for the PRS 441 Project is separate and apart from the \$29 million funding for OU-1 Project and is outside of the \$30 million appropriated for the project. The rail spur is operational and available for use. PRS 441 was binned a removal action on March 1, 2005; however, the data package has not been signed or sent for public comment.
- (c) The Contractor shall remediate and verify the soil staging area (PRS 441) in accordance with and consistent with the Mound 2000 Response Action Process outlined in the Work Plan for Environmental Restoration of the DOE Mound Site, The Mound 2000 Approach, Final, February 1999. The Contractor shall remove the railroad tracks and excavate the contaminated soils and pavement, if determined to be necessary under the above Mound 2000 Approach, and conduct Final Verification Survey (FVS). All supporting infrastructure and Government Furnished Services Items (GFSI) shall also be disposed of by the Contractor. All cost associated with the PRS 441 Project, including section 2.4 and 2.5 shall be allocated to CLIN006.
- (d) The Contractor shall excavate, package, transport/ship, and dispose of all waste from the remediation of PRS-441.

2.4 Final Verification Survey

- (a) The Contractor shall conduct a Final Verification Survey in the PRS 441 area and all of the OU-1 areas. Backfilling and regrading in the OU-1 area (section 2.5.1) shall be performed prior to the Final Verification Survey. Any additional contaminated spot discovered during backfilling and regrading shall be removed prior to the Final Verification Survey. Final Verification Surveys shall be conducted using a plan approved by Ohio and USEPA.
- (b) The Contractor shall collect all Final Verification Samples to a depth of known waste or un-sampled soil and analyze per SAAP. The Mound Cleanup Values for a carcinogen is $10E5$ calculated excess cancer risk under a site office worker and construction worker scenario as described in the Mound 2000 Residual Risk Evaluation Methodology document (Final, January 1997). For non-carcinogens, a hazard index of less than one is targeted.

- (c) The Contractor shall provide documentation of the OU-1 end state as well as any and all documentation to support a draft OU-1 ROD Amendment.

2.5 Site Restoration

- (a) The Contractor shall leave the site in a manner that is at least as protective of human health and the environment as before the OU-1 project remediation (this task order) which is compliant with the requirements defined by the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) OU-1 ROD. In addition to any other requirements of the SOW, including, but not limited to, disposal of the Site Sanitary Landfill wastes either on-site or off-site and covering in an appropriate manner, this task order requires compliance with any and all regulatory, federal, state, and local requirements regarding any wastes that are not removed from the site, backfilling, grading, and seeding in all disturbed areas.
- (b) If the Contractor determines that the Site Sanitary Landfill waste can appropriately and properly be disposed on-site, the Contractor shall place the waste within a compacted clay liner similar to that of the existing Site Sanitary Landfill. The Contractor shall load and transport the waste to the location, and cover the cap with two (2) feet of soil and mark with geofabric.

2.5.1 Final Grading, Seeding and Extraneous Debris Removal

- (a) Upon completion of the excavation, the Contractor shall prepare the disturbed area(s) for reuse by grading, seeding and removing debris from all of the areas. These areas shall include PRS 441 and the OU-1 disturbed areas, and the staging area. The contractor shall provide a grading plan in the Site Specific Excavation Plan for the excess soils and disturbed areas.
- (b) For the Contractor's information only, reuse of the OU-1 area has been broken down into the sub-areas (see Figure 5), defined as follows:
 - 1. (Sub-area A): transition from the proposed roadway (Vanguard Boulevard) to the buildable area
 - 2. (Sub-area B): the buildable area, which includes the building pads and parking areas
 - 3. (Sub-area C): the transition area from the buildable area back into natural topography

- (c) For the Contractor's information only, the slopes for sub-area A from the back of the proposed sidewalk to the finished grade for the building pad (proposed for each lot) should be a maximum of 3:1 with a preferred of 4:1 or less. The slopes for sub-area C should be similar to sub-area A. Depending on the volume of waste removed and berm material available, the desire is to provide a finished grade for each proposed building pad to have a minimum of eight feet (six feet above geo-fabric and the two (2) foot soil cover that is required for any waste remaining on site). The proposed elevation for the building pads is approximately 719 feet. Building pad(s) including an area for parking lots should be leveled (2% slope, max.) for drainage.
- (d) Given the above information (Section 2.5.1(b),(c)), if enough excess soil is not available to fill the areas in order to achieve the preferred requirement and grades, the Contractor shall consult with DOE for a determination regarding the priority of the areas for use of the preferred requirement and shall develop the grading plan accordingly. Excess berm soils shall only be used to backfill the Historic Waste Disposal Area. The Contractor shall grade the OU-1 Project area in a manner that provides uniform slopes as well as positive drainage.
- (e) If the Contractor determines and DOE approves that a storm water retention/detention basin for the Historic Waste Disposal Area is necessary, the Contractor shall construct a storm water retention/detention basin. The basin shall begin no less than ten (10) feet from the back of the proposed sidewalk in Figure 5. In addition, the basin should be constructed as a retention and detention basin that complies with and meets the Montgomery County, Ohio regulations for storm water detention. The approximate storm water detention volume required is 538,200 cubic feet.
- (f) For areas that are backfilled or disturbed, the top 6" shall be free of stones or foreign materials larger than 1". Seeding and mulching shall be per Ohio Department of Transportation Specification 659, or approved equal.
- (g) For backfilling, the Contractor shall install the material in maximum of 8" to 12" lifts unless deviations are approved by DOE. Backfill shall be compacted to meet reuse requirements (85% Standard Procter (SP) for landscaped areas, 92% SP for parking or building areas, and 95% SP for roadways).

Table-1: Mound Cleanup Value Table

Mound Cleanup Value Table (pCi/g)						
RADIONUCLID E	Bkgd.	Guideline	Screening	Cleanup	Hot Spot	CRDL
		Value 10⁻⁶	Level ⁽⁶⁾	Objective	Criteria	
Actinium-227+D	0.11 ⁽³⁾	0.45 ⁽²⁾ +D	0.56	4.6	13.61	0.8
Americium-241	ND	6.3 ⁽²⁾	6.3	63	189	1.0
Cerium-141	assume 0	3.8	3.8	38	114	
Cesium-137+D	0.42	0.34 ⁽²⁾ +D	0.76	3.8	10.62	0.2
Cobalt-60	NC	0.07 ⁽²⁾	0.07	0.7	2.1	0.12
Curium-244	ND	9.2	9.2	92		
Lead-210+D	1.2 ⁽³⁾	0.62 ⁽²⁾ +D	1.8 ⁽⁷⁾	7.4	19.8	1.0
Neptunium-237+D	assume 0	1.04	1.04	10.4	31.2	
Niobium-95	assume 0	0.25	0.25	2.5	7.5	
Plutonium-238	0.13	6.1 ⁽¹⁾	55 ⁽⁴⁾	55	165.13	0.01
Plutonium-239/240 ⁽⁹⁾	0.18	6.0	6.2	62		0.01
Protactinium-231+D	0.11 ⁽³⁾	0.39 ⁽²⁾ +D	4.0 ⁽⁸⁾	4.0	11.81	
Radium-226+D	2.0	0.09 ⁽²⁾ +D	2.1	2.9	4.7	1.3
Radium-228	1.4 ⁽¹⁰⁾	0.07	1.47 ⁽¹⁰⁾	2.1 ⁽¹⁰⁾		
Thorium-228+D	1.5	0.11 ⁽²⁾ +D	1.61	2.6	4.8	0.1
Thorium-230+D	1.9	0.09 ⁽²⁾	10MDA ⁽⁵⁾ or 2.0	2.8	4.6	0.1
Thorium-232+D	1.4	0.07 ⁽²⁾	1.47	2.1	3.5	0.1
Uranium-233+D	assume 0	0.48	0.48	4.8		
Uranium-234+D	1.1	0.09	1.2	2.0		
Uranium-235+D	0.11	0.31	0.42	3.2		
Uranium-238+D	1.2	0.1 ⁽²⁾ +D	1.3	2.2	4.2	
Bismuth-207	ND	0.12	0.175 ⁽⁷⁾	1.2	3.6	
Bismuth-210m	ND	0.83	1.0 ⁽⁷⁾	8.3	24.9	
Tc-99		214	214	2140		
Strontium-90	0.72	9.4	10.1	94.72	282.72	

NOTES:
U238>th234>Pa234m>U234>th230
(1) These guideline values are based on the more restrictive of the Construction Worker and Site Employee Values from Risk-Based Guideline Values, Mound Plant, Miamisburg, Ohio, March 1997, Final (Revision 4), Appendix B, Tables 4B & 5B.
(2) These guideline values are based on the more restrictive of the Construction Worker and Site Employee Values. These values were calculated using the methodology contained in Risk Based Guideline Values, March 1997, Final but were performed using April 2001 HEAST slope factors.
(3) These radionuclides have comparatively short half-lives and are deduced to be in secular equilibrium with the parent nuclide. Thus the background value measured for the parent is considered to be the appropriate value for these as well. The validity of using this method for background determination for other radionuclides will be assessed on a case by case basis
(4) These values represent 1E-5 risk value
(5) If Th-230 is a contaminant of concern (COC), then the Screening Level is 1.99 pCi/g (10-6 RBGV (0.09 pCi/g) plus background (1.9 pCi/g)). If Th-230 is not a COC MCP will use our normal sample analysis process through gamma spectroscopy unless specified differently in a sampling and analysis plan. MCP will assure that the Th-230 MDA is less than 10 pCi/g (This implies a minimum laboratory counting time). If Th-230 is detected greater than the MDA but below 10 pCi/g, MCP may re-analyze (gamma or alpha spectroscopy) the soil sample to confirm the absence or presence of Th-230. The MDA must be less than 10 pCi/g for the Th-230 result to be of value. 10 pCi/g is not a screening level for Th-230, rather an MDA for Th-230, at which gamma spec analysis can cease and results can be reported. It is more a reporting limit and defines the count time for the analysis suite because it is the limiting isotope (requires longest count to "see").
(6) The Screening Level is reflective of onsite Gamma Spec Laboratory capabilities and will be used to determine if additional (above guideline values) will trigger alpha spectroscopic analysis of the sample
(7) Current Contract-Required Detection Limit (CRDL)
(8) Per agreement, 10-5 + background will be used because of the inability to "see" Pa at 10-6 level.
(9) Pu-238/239, Pu-239, and Pu-240 10-6 = 6.0 pCi/g
(10) based on parent nuclide (Th-232) and its background
U-238 may be assessed for secular equilibrium and appropriate GV used.
NC = Not Calculated
ND = Not detected
HEAST slope factors dated April 2001.
10 ⁻⁵ + bkgd approved based on lab detection limitations

3.0 Project Completion and Demobilization

Upon completion of all remediation tasks required per the SOW or completion of work that was authorized by the Contracting Officer, the Contractor shall be responsible for decontamination, demolition, and final disposal of all equipment used for performing the activities under the SOW.

4.0 Project Support

4.1 Project Management System

The Contractor shall use a Project Management System that has the capability to generate Earned Value Performance analysis reports and fully resource loaded integrated schedules. In addition, the Contractor shall perform critical path analysis, track milestones, and provide appropriate performance metrics. Heavy emphasis is required on measuring cost against the performance metrics in a real time basis.

4.2 Environment, Safety and Health (ES&H) Program

- (a) The Contractor shall be responsible for developing and/or maintaining the ES&H program consistent with the SOW to ensure the protection of the public, workers and the environment.
- (b) The Contractor's ES&H program shall be operated as an integral part of how the Contractor conducts business and shall meet all applicable Federal and State regulatory and statutory requirements including, but limited to:
 - (i) Health & Safety Plans as required by the Occupational Safety and Health Administration (OSHA) and required reports to OSHA.
 - (ii) Environmental monitoring program and annual report to demonstrate that all discharges and releases are in compliance with regulatory requirements. The program includes collection of required samples from on-site locations to ensure that cross contamination as a result of work activities has not occurred.
 - (iii) Training as required by OSHA, DOE, DOT to Contractor and DOE employees. Provide site access training to Contractor, DOE, and Contractor employees as required. The Contractor shall submit to DOE any required reports related to personal contamination events.
 - (iv) Safety and health personal protective equipment for both Contractor and DOE employees at the OU-1 and PRS 441 projects.

- (v) Promptly evaluate, report to regulators (coordinated through DOE), and resolve any non-compliance with H&S requirements.
- (vi) An Occupational Radiation Protection Program to monitor and control employee exposure to ionizing radiation as required by 10 CFR 835.
- (vii) A Radiation Protection Program for the Public and the Environment in accordance with 10 CFR 834.
- (viii) An Occupational Safety and Health Program in accordance with 10 CFR 851, Worker Safety and Health Program.
- (ix) An Integrated Safety Management System in accordance with DOE P 450.4, Safety Management System Policy, and Integrated Safety Management System Guides, DOE G 450.4-1 B Volumes 1 and 2.
- (x) E S & H reporting in accordance with DOE M 231.1-1A, Environment, Safety, and Health Reporting Manual, and DOE M231.1-2, Occurrence Reporting and Processing of Operations Information.
- (xi) A First Responder EOC capability sufficient to provide for the management of events and incidents that may occur within the Contractor's controlled area and to interface effectively with local emergency responders. The Contractor shall be able to effectively manage events, at a minimum, relating to fire, radiological, injury and illness, and severe weather. The Contractor shall develop and maintain its own First Responder Plan. This plan shall include coordination with DOE and City of Miamisburg and provide for abnormal event reporting.
- (xii) Maintain occupied facilities and trailers within the Contractor's work area sufficiently to meet the applicable sections of NFPA 101, "Life Safety Code."
- (xiii) Compliance with wastewater limits as defined in NPDES permit
- (xiv) Compliance with air emissions restrictions in OEPA Permit
- (xv) Compliance with NEPA
- (xvi) Compliance with NESHAPS

4.3 Security

The Contractor shall provide property protection to the property within and property of the Contractor's work area. The Contractor shall ensure adequate levels of protection against unauthorized access, loss or theft of Government property, and other intentional misconduct that may cause unacceptable adverse impacts to the health and safety of employees, the public, or the environment. The Contractor shall report damage or theft of Government property in accordance with 41 CFR 109-1.5112; and -1.5113.

4.4 Site Access and Traffic Control

- (a) Because there are private businesses located northeast of the OU-1 Project area that require access for their employees, vendors and clients on a daily basis, the Contractor shall develop and implement a Site Access Control and Traffic Plan to provide adequate and safe means of ingress and egress for these private vehicles during the OU-1 Project. In addition, this plan shall include maintaining the existing roadway in a safe and drivable condition and providing an alternative route for the traffic if the excavation activity encroaches upon the roadway or creates a safety hazard.
- (b) The Contractor shall maintain the access roadway on DOE property including removal of mud, snow and dust control.

5.0 Regulator Interaction

All Contractor interactions with the regulators shall be coordinated through DOE. Meetings shall take place with representatives from DOE, MMCIC, the United States Environmental Protection Agency (USEPA), Ohio Environmental Protection Agency (OEPA) and the Contractor to eliminate barriers to success and foster mutual understanding of Task Order and regulatory-related issues. Such meetings shall also facilitate the technical and fiscal issues during the performance of the SOW. Coordination of activities with the regulators shall be conducted through the Designated Contracting Officer's Representative (DCOR).

6.0 Public Involvement and Stakeholder Interaction

- (a) DOE and Miamisburg Mound Community Improvement Corporation (MMCIC), the entity responsible for the transfer and management of the Mound established a working relationship to transition the Mound Facility consistent with the "Memorandum of Agreement by and between the United States Department of Energy Miamisburg Environmental Management Project and the Miamisburg Mound Community Improvement Corporation", dated January 23, 1998, through the Sales Contract for the Mound Facility. The MMCIC is an agent of the City of Miamisburg for economic, commercial and industrial development of the Mound Site.

- (b) DOE, MMCIC and the City of Miamisburg have been working collaboratively as a team to achieve the transfer of an environmentally clean facility that is economically viable. The Contractor shall coordinate jointly with DOE and MMCIC for work activities outside the Contractor controlled areas, if any.
- (c) The Contractor shall provide support to the DOE for the public involvement and stakeholder interaction which shall include, but not be limited to, the generation of the PRS 441 public fact sheet, and responding to any resulting comments.

FIGURE 1

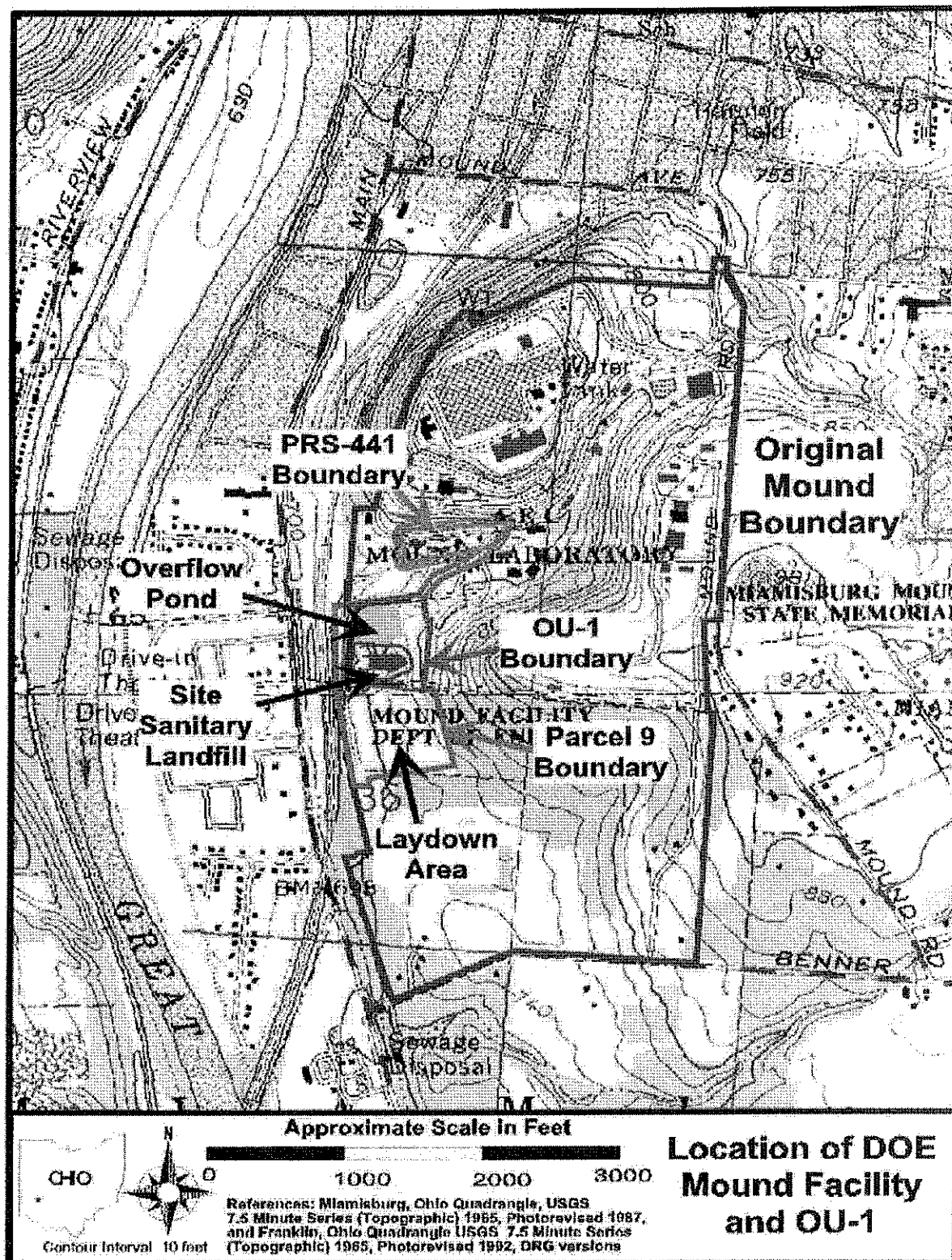


FIGURE 2

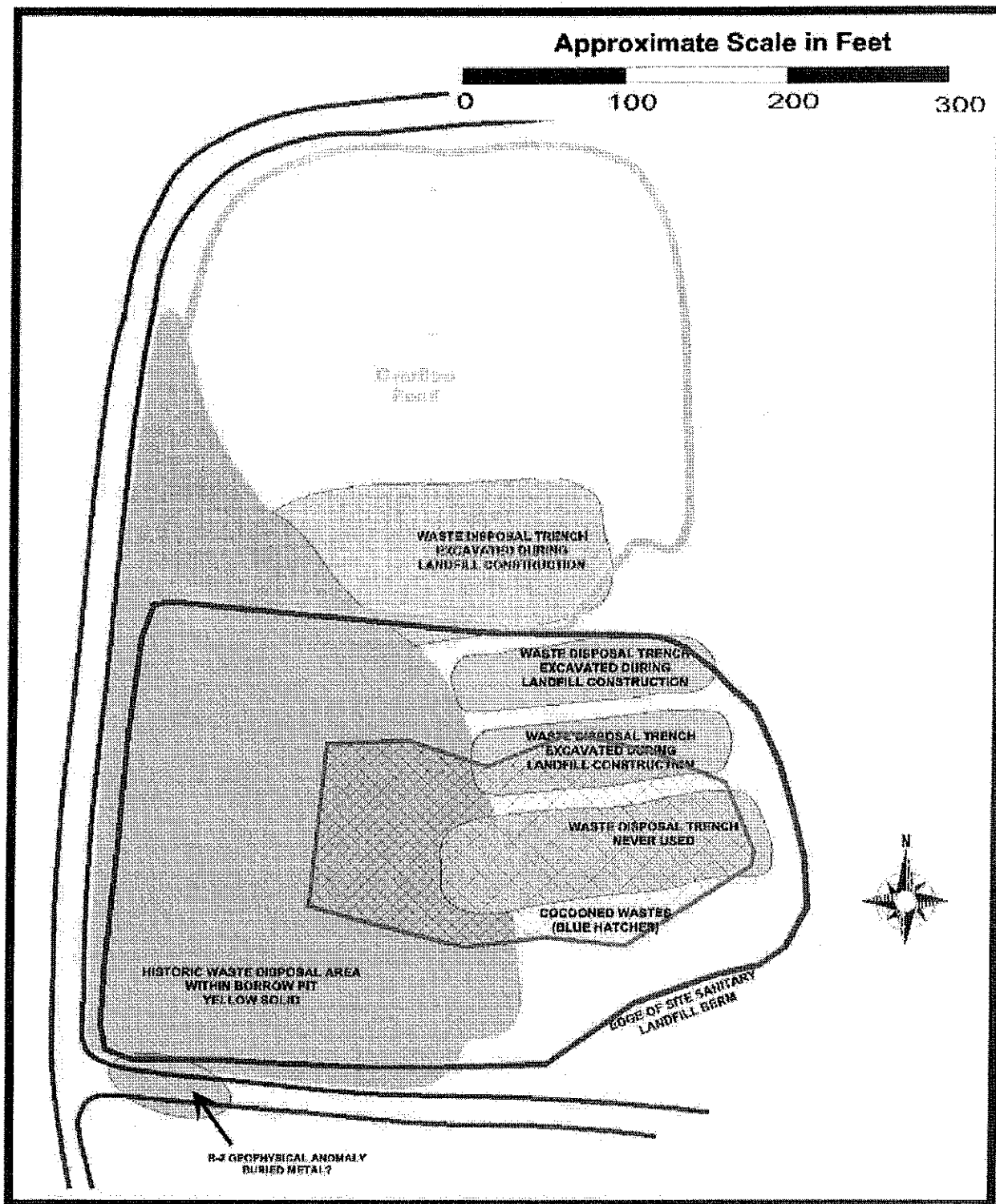


FIGURE 3

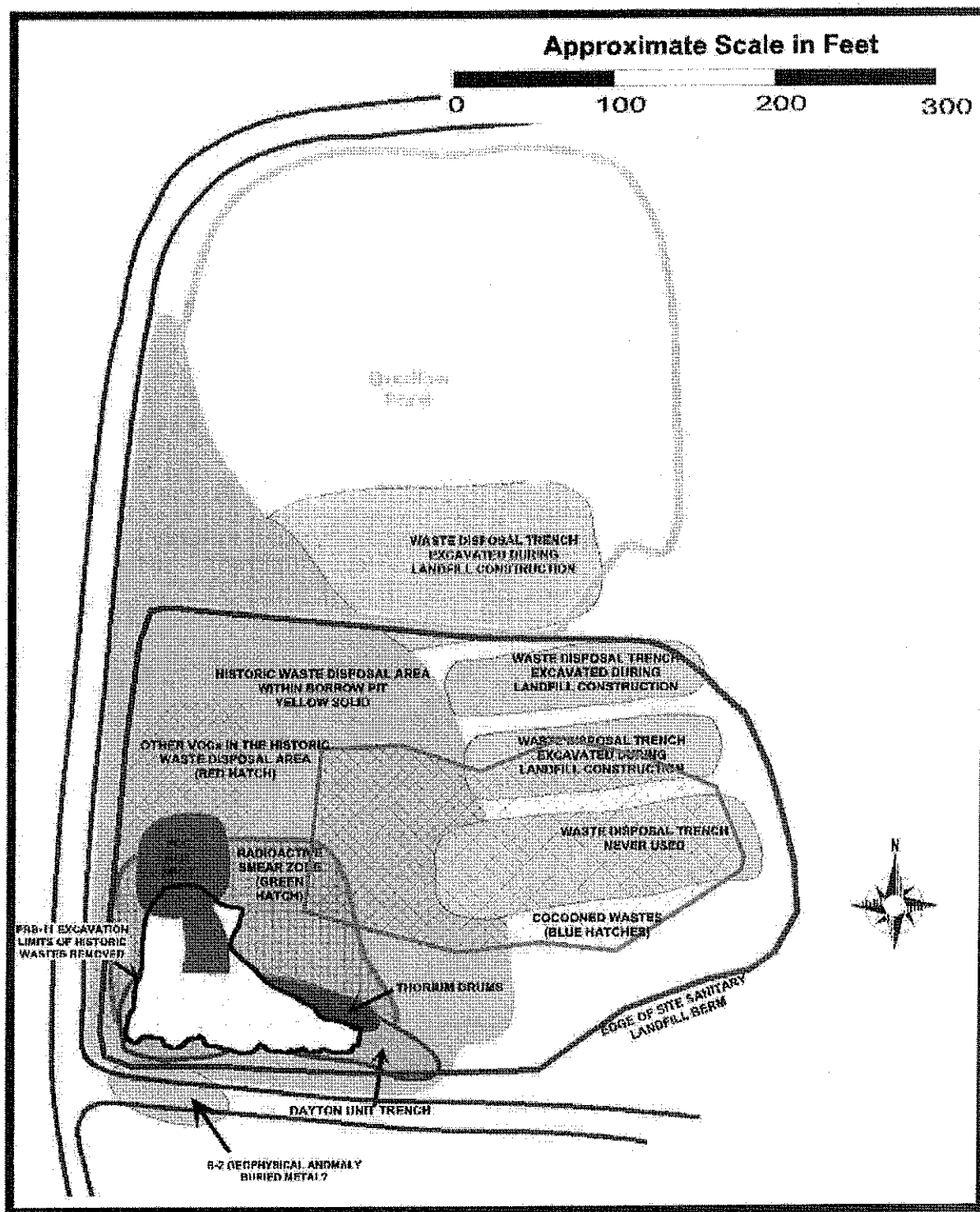


FIGURE 4

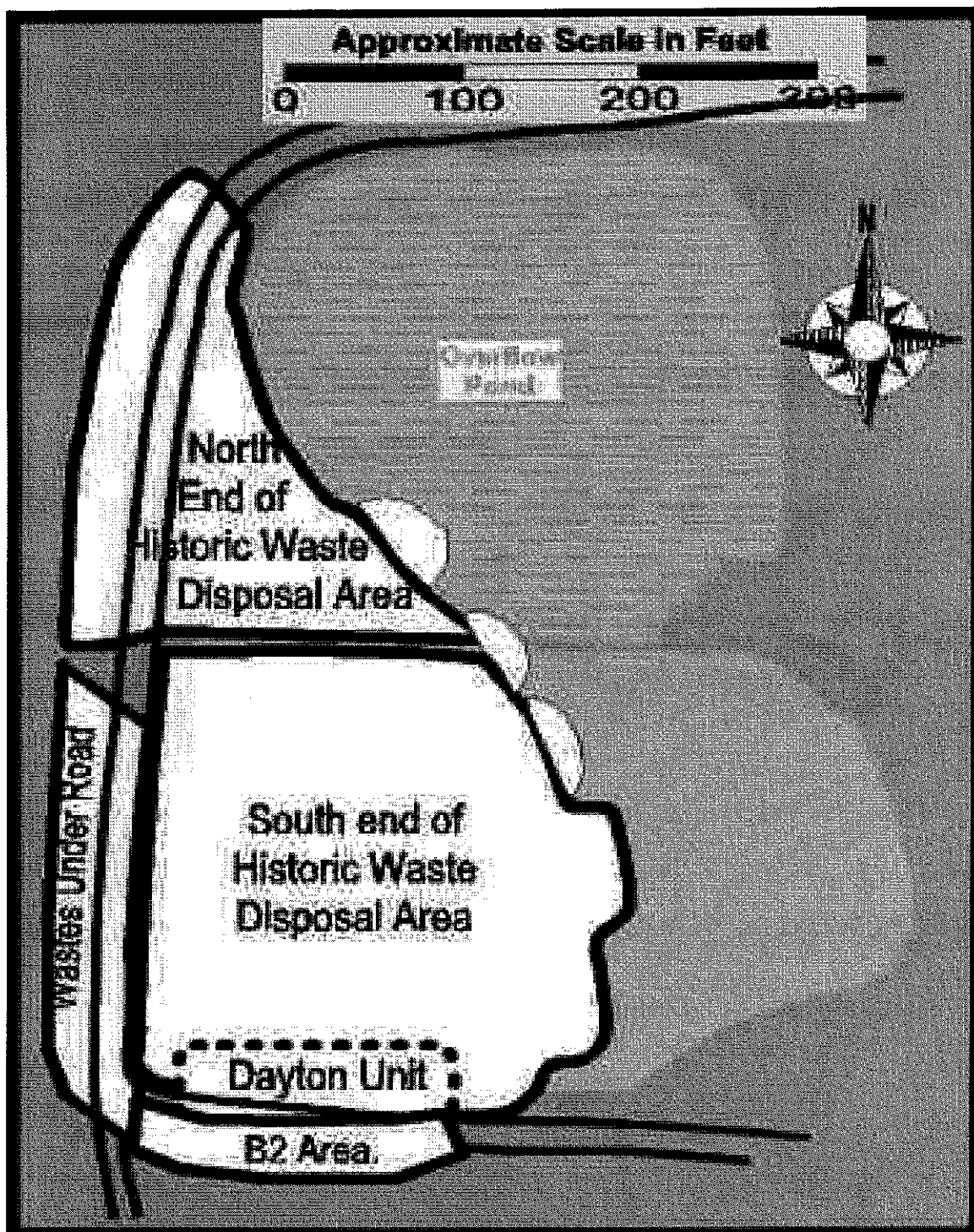
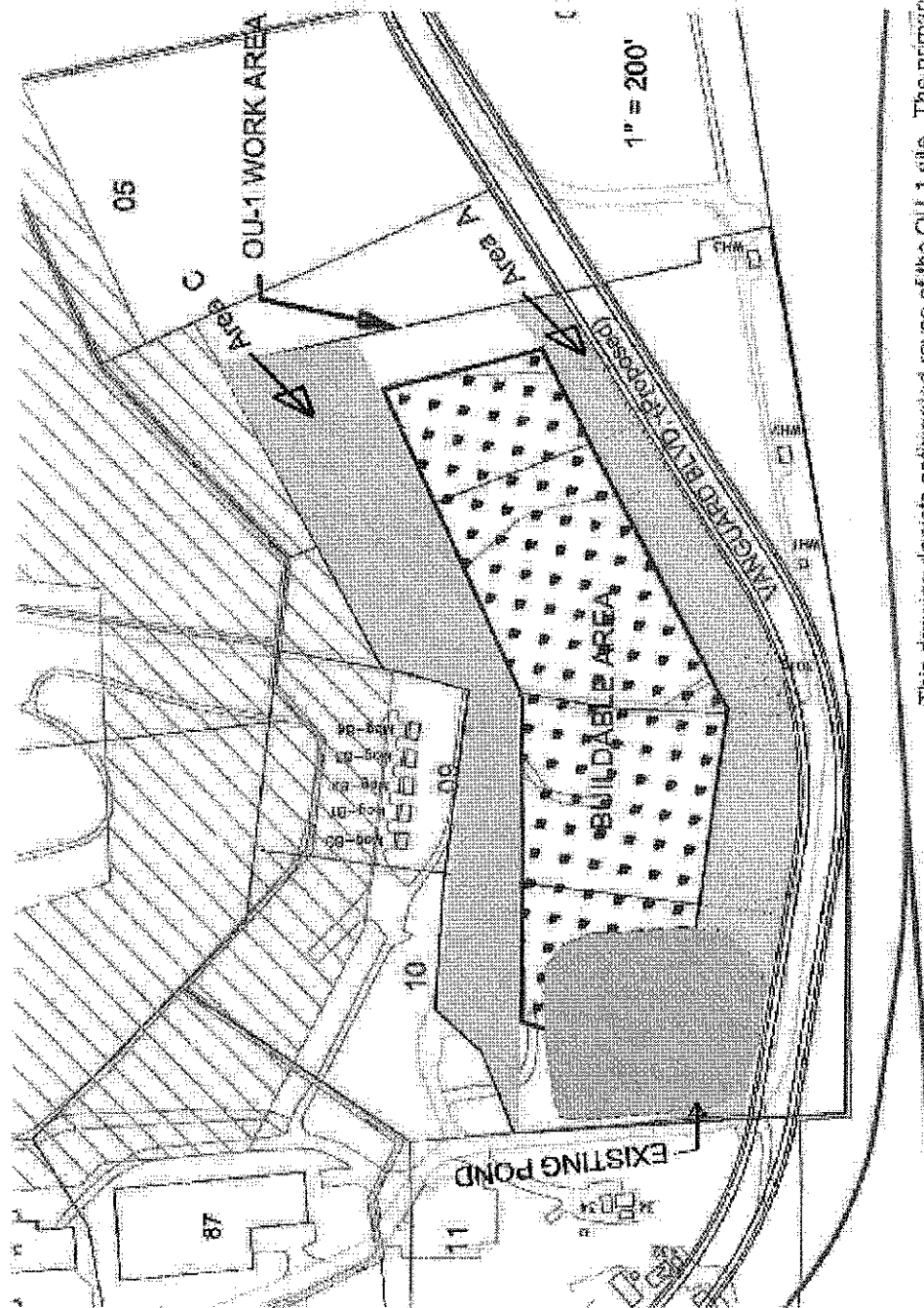


FIGURE 5



This drawing depicts anticipated reuse of the OU-1 site. The primary purpose of the OU-1 Project is to contract for a process optimizing the maximum removal of contamination.